In the Claims:

What is claimed is:

1. Cancelled.

2. Cancelled.

3. (Currently amended) The compound

(1*R*)-(3-Benzenesulfonylcyclohepta-2,4-dienyloxy)-trimethylsilane;

(1*R*, 2*R*, 3*R*)-3-Benzenesulfonyl-2-methyl-5-phenylsulfanylcyclohept-4-enol;

(1*R*,2*R*)-(3-Benzenesulfonyl-2-methyl-5-phenylsulfanylcyclohept-4-enyloxy)-trimethylsilane;

(1*R*,2*S*)-3-Benzenesulfonyl-2-methyl-5-phenylsulfanylcyclohept-4-enyloxy)-*tert*-butyldimethylsilane;

(1*R*, 2*S*)-2-Methyl-5-phenylsulfanylcyclohepta-3, 5-dienol;

(1*R*,2*R*)-*tert*-Butyldimethyl-(2-methyl-5-phenylsulfanylcyclohepta-3,5-dienyloxy)-silane;

(1*S*, 2*S*, 7*S*)-2,7-Dimethyl-4-phenylsulfanylcyclohepta-3,5-dienol;

(1*S*, 2*S*, 7*S*)-4-Benzenesulfonyl-2,7-dimethylcyclohepta-3,5-dienol;

(1*S*,2*S*,7*S*)-(4-Benzenesulfonyl-2,7-dimethylcyclohepta-3,5-dienyloxy)-*tert*-butyldimethylsilane;

(1*S*,2*R*,7*S*)-2-Dimethylaminomethyl-7-methyl-4phenylsulfanylcyclohepta-3,5-dienol;

(1*R*, 2*R*, 3*R*, 4*S*, 7*R*)-6-Benzenesulfonyl-2,4-dimethyl-8-oxabicyclo[5.1.0]oct-5-en-3-ol;

(1*S*, 2*R*, 3*R*, 4*S*, 7*S*)-6-Benzenesulfonyl-2,4-dimethyl-8-oxabicyclo[5.1.0]oct-5-en-3-ol;

(1*R*, 2*S*, 3*R*, 4*S*, 7*R*)-(6-Benzenesulfonyl-2,4-dimethyl-8-oxabicyclo[5.1.0]oct-5-en-3-yloxy)-*tert*-butyldimethylsilane;

(1*S*, 2*S*, 3*R*, 4*S*, 7*S*)-(6-Benzenesulfonyl-2,4-dimethyl-8-oxabicyclo[5.1.0]oct-5-en-3-yloxy)-*tert*-butyldimethylsilane;

(1*S*, 2*S*, 3*R*, 4*R*, 5*S*)-7-Benzenesulfonyl-3,5-dimethylcyclohept-6-ene-1,2,4-triol;

(1*S*,2*S*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyldimethylsilanyloxy)-5,7-dimethylcyclohept-3-ene-1,2-diol;

(1*S*, 2*S*, 3*R*)-Acetic acid 3-benzenesulfonyl-2-methyl-5-oxocycloheptylester;

(1*E*,3*Z*,5*R*,6*S*)-2-(*tert*-Butyldimethylsilanyloxy)-5-methyl-6-triisopropylsilanyloxycyclohepta-1,3-diene;

(1*R*,2*R*,3*S*,5*S*,8*E*)-9-(*tert*-Butyldimethylsilanyloxy)-2-methyl-3-triisopropylsilanyloxy-6,7-dioxabicyclo[3.2.2]-non-8-ene;

1*R*,2*R*,3*R*,4*S*,6*S*)-7-(*tert*-Butyldimethylsilanyloxy)-2,3-dihydroxy-4-methyl-5-triisopropylsilanyloxycycloheptanone;

(1*R*,2*R*, 3*R*, 4*S*, 6*S*)-7-(*tert*-Butyldimethylsilanyloxy)-2-hydroxy-3-methoxy-4-methyl-5-triisopropylsilanyloxycycloheptanone;

(2*S*, 4*S*, 5*R*, 6*R*)-2-(*tert*-Butyldimethylsilanyloxy)-6-methoxy-5-methyl-7-oxo-4-triiso-propylsilanyloxyheptanoic acid methyl ester;

(1*R*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyldimethylsilanyloxy)-5,7-dimethylcyclohept-3-enol;

(1*S*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyldimethylsilanyloxy)-5,7-dimethylcyclohept-2-enol;

~~4-(*tert*-Butyldimethylsilanyloxy)-6-methoxy-3,5-dimethyltetrahydropyran-2-yl]-acetic acid methyl ester;~~

~~(2*R*,3*S*,4*S*,5*R*) [4 (tert Butyldimethylsilanyloxy) 6 hydroxy 3,5 dimethyltetrahydropyran 2 yl] acetic acid methyl ester;~~

~~(2*R*,3*S*,4*S*,5*R*,6*S*) [4 (*tert* Butyldimethylsilanyloxy) 6 methoxy 3,5 dimethyltetrahydropyran 2 yl] acetic acid methyl ester;~~

(1*S*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyl-dimethylsilanyloxy)-5,7-dimethylcyclohept-3-enol;

~~(2*S*,3*S*,4*S*,5*R*) [4 (*tert* Butyldimethylsilanyloxy) 3,5 dimethyl 6 oxotetrahydropyran 2 yl] acetic acid methyl ester;~~

~~(2*S*,3*S*,4*S*,5*R*) [4 (tert Butyldimethylsilanyloxy) 6 hydroxy 3,5 dimethyltetrahydropyran 2 yl] acetic acid methyl ester;~~

(1*S*,4*S*,5*R*,6*R*,7*S*)-2-Benzenesulfonyl-5,7-bis-(*tert*-butyldimethylsilanyloxy)-4,6-dimethylcyclohept-2-enol;

(3*S*,4*R*,5*R*,6*S*,7*S*)-1-Benzenesulfonyl-4,6-bis-(*tert*-butyldimethylsilanyloxy)-7-methoxy-3,5-dimethylcycloheptene;

(2*S*, 3*S*, 4*R*, 5*S*, 6*R*)-3,5-Bis-(*tert*-butyldimethylsilanyloxy)-2-methoxy-4,6-dimethyl-7-oxoheptanoic acid methyl ester;

~~(3*S*, 6*S*) (3 Methoxy 6 methylcyclohex 1 enesulfonyl) benzene;~~

~~(*S*) 4 Methylcyclohex 2 enone;~~

~~(1*S*, 4*S*) 3 Benzenesulfonyl 4 ethylcyclohex 2 enol;~~

~~(3*S*, 6*S*) (6 Ethyl 3 methoxycyclohex 1 enesulfonyl) benzene;~~

~~(*S*) 4 Ethylcyclohex 2 enone;~~

~~(1*S*, 4*R*) *3* Benzenesulfonyl 4 isopropylcyclohex 2 enol;~~

~~(3*S*, 6*R*) (6 Isopropyl 3 methoxycyclohex 1 enesulfonyl) benzene;~~

~~(*R*) 4 Isopropylcyclohex 2 enone;~~

~~(*1S,4R*) *3* Benzenesulfonyl 4 *tert* butylcyclohex 2 enol;~~

~~(3*S*, 6*R*) (6 *tert* Butyl 3 methoxycyclohex 1 enesulfonyl) benzene;~~

~~(*S*) 4 *tert* Butylcyclohex 2 enone;~~

~~(1*S,4S*) *3* Benzenesulfonyl 4 (dimethylphenylsilanyl)cyclohex 2 enol;~~

~~(1*S,4S*) (2 Benzenesulfonyl 4 methoxycyclohex 2 enyl) 1 dimethylphenylsilane;~~

(1*S*, 4*S*)-3-Benzenesulfonyl-4-methylcyclohept-2-enol;

(3*S*, 7*S*)-1-Benzenesulfonyl-3-methoxy-7-methylcycloheptene; or

(*S*)-4-Methylcyclohept-2-enone.

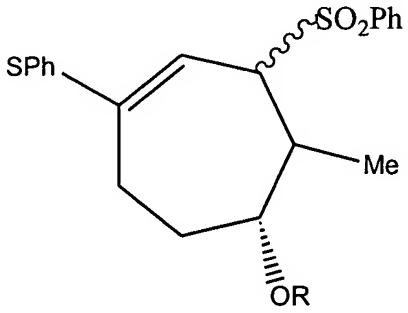
4. (Currently amended) A compound of claim 1~~2~~, wherein the compound is produced by oxidation of dienylsulfides through addition of an oxidizing agent such as *m*CPBA.

5. (Currently amended) A compound of claim 1~~2~~, wherein the compound is made by a process in which reaction of allyl sulfones with TMS triflate and an amine, such as an organic amine including triethylamine in a solvent such as methylene chloride at reflux effects regiospecific elimination to yield dienylsulfides; the dienylsulfides are oxidized through addition of an oxidizing agent, preferably a peroxide oxizing agent including *m*CPBA ; and wherein the

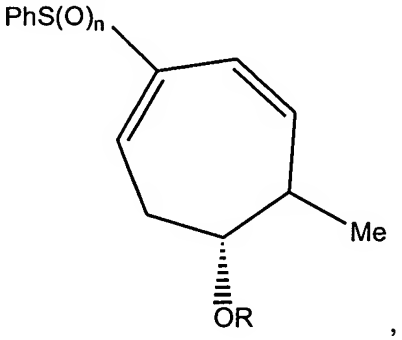
process can be done one pot or in steps.

6. (Currently amended) A compound of claim 12, wherein the compound is made by:

(a) reacting allyl sulfones of the formula



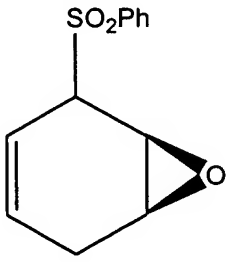
with TMS triflate and an amine, such as an organic amine including triethylamine in a solvent, such as methylene chloride, at reflux to yield a dienylsulfide of the formula



,

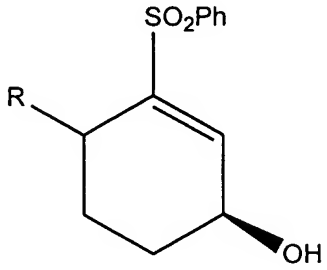
and oxidizing the dienylsulfide with an oxidizing agent, preferably a peroxide oxidizing agent such as *m*CPBA, where R is C_1-C_5 alkyl, phenyl, substituted phenyl, vinyl, alkynyl, trimethylsilyl or t-butyldimethylsilyl and wherein the reaction can be done one pot or in steps.

7. (Currently amended) A compound of claim 12, wherein the compound is made by alkylating an epoxyvinylsulfone of the formula

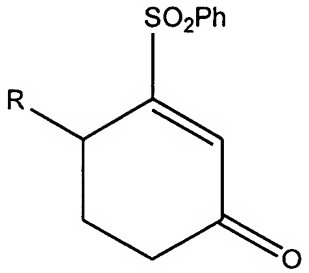


in a reaction medium comprising $(R)_2CuLi$, a solvent, such as an ether solvent, such as THF, ET_2O or a mixture of THF and Et_2O, where R is a C_1 to C_5 alkyl and wherein the reaction can be done one pot or in steps.

8. (Currently amended) A compound of claim 12, wherein the compound is made by oxidizing an allylic alcohol of the formula

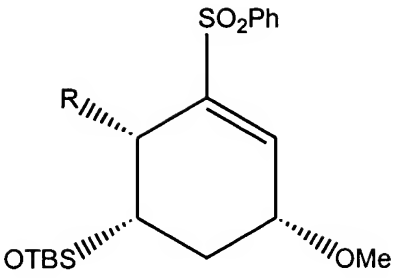


where R is a C_1 to C_5 alkyl, phenyl, substituted phenyl, vinyl, alkynyl, trimethylsilyl or t-butyldimethylsilyl to yield a β-sulfonyl enone of the formula



wherein the β-sulfonyl enone is subjected to Michael addition of heterocuprates and subsequent β-elimination of sulfinate, and
wherein the reactions are done one pot or in steps.

9. (Currently amended) A compound of claim 12, wherein the compound is made by reacting a sulfone of the formula

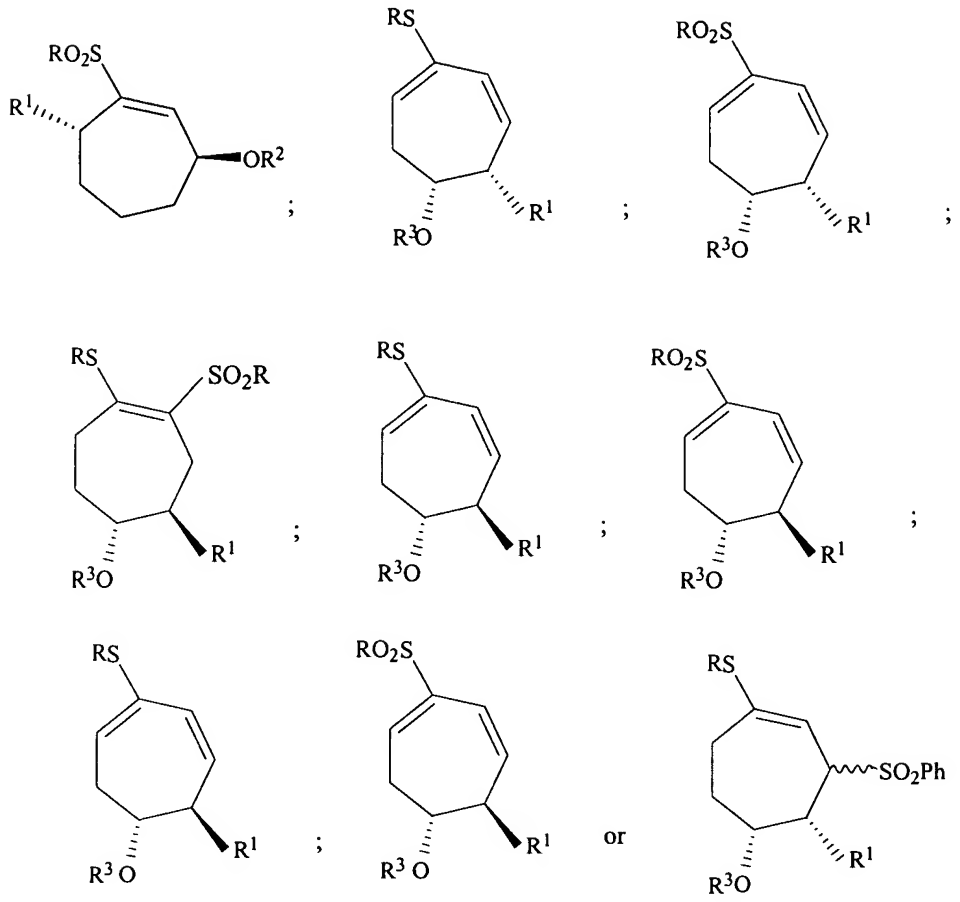


where R is a C_1 to C_5 alkyl, phenyl, substituted phenyl, vinyl, alkynyl, trimethylsilyl or t-butyldimethylsilyl with one or more alkyl halides.

10-11. Cancelled.

The following claims 12-13 are newly added:

12. (New) A compound selected from compounds of the formulae:



wherein:

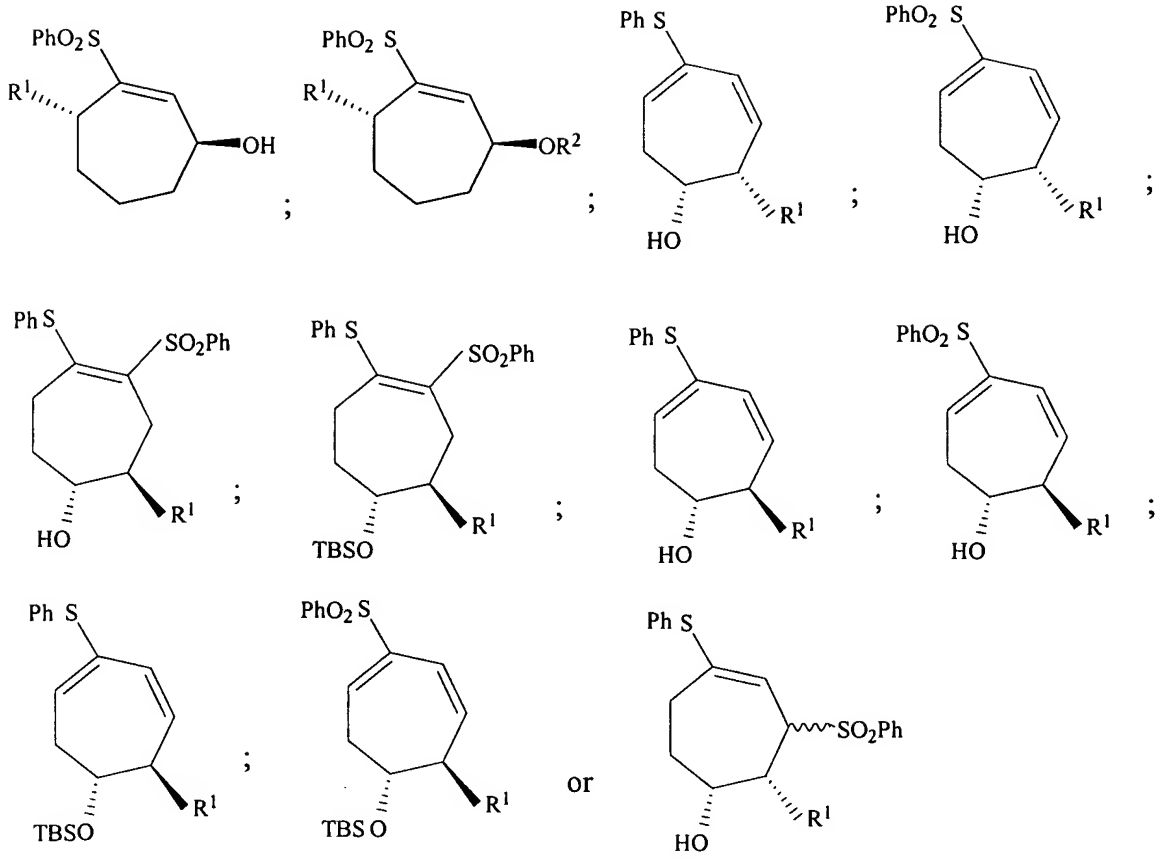
R^1 is a C_1-C_5 alkyl group;

R^2 and R^3 are independently selected from H, a C_1-C_4 alkyl group or a blocking group, preferably a silyl-containing blocking group such as a trimethyl silyl group or a t-butyl dimethyl silyl group; and

R is a phenyl or substituted phenyl group wherein the substituted phenyl group is substituted in one instance at the ortho, meta or para position of the phenyl group with a C_1-C_4 alkyl group, a halogen (F, Cl, Br, I) a nitro group, an amine, hydroxyl, alkyl ester (wherein the alkyl group on the ester is a C_1-C_4 alkyl group), alkylether (wherein the alkyl group on the ester is a C_1-C_4 alkyl group) or acyl group,

and stereoisomers thereof.

13. (New) A compound of claim 12, wherein the compound is selected from compounds of the formulae:



and stereoisomers thereof.